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ABSTRACT

Offered as an aid for developing sequential occupational education programs, the publication presents a concept in career education planning beginning with kindergarten and continuing through adult years. Career education goals are defined, and steps in planning sequential programs are outlined as follows: (1) organization of the occupational advisory committee, (2) identification of employment opportunities, (3) determination of instructional objectives, (4) development of instructional content, (5) determination of program duration, (6) establishment of criteria for enrollment of students, (7) determination of facilities and equipment, (8) arrangements for staffing, (9) provisions for occupational guidance and placement, and (10) establishment of evaluation procedures. K-8 occupational information activities are suggested and sequential occupational program models for the four secondary levels offered for: (1) applied biological and agricultural occupations; (2) business, marketing, and agricultural occupations; (3) health occupations; (4) industrial oriented occupations; and (5) personal and public service occupations. A list of postsecondary programs in each of the five occupational areas concludes the document. (MW)

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An AID for PLANNING PROGRAMS in CAREER EDUCATION

State of Illinois
Board of Vocational Education and Rehabilitation
Division of Vocational and Technical Education
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FOREWORD

This publication presents a concept in career education planning beginning with kindergarten and continuing through adult years. This concept is one of many that might be used in planning occupational programs. Local circumstances, student needs and personal preference will play a most important part in your planning.

Career education curricula should be an integral part of the total school program. Realistic preparation for the world of work must be accepted as a basic responsibility of public education.

To be most effective, cooperative planning should be implemented between general and occupational educators to:

1. Examine the needs of students
2. Provide for team planning of curriculum and teaching
3. State objectives in measurable terms for continuous evaluation
4. Insure maximum involvement of administrators

The 1968 vocational education legislation and subsequent legislation has been intended to extend career education programs to more individuals and include preparation for occupational fields which heretofore have been neglected. Much needs to be done to initiate new programs and to adjust to changing community and individual personal career education needs.

Development of a carefully structured, fully articulated program of occupational education is vital not only to young people and adults in our society today, but to the educational agencies – at all levels – designed to serve them.

It is hoped that school administrators, supervisors, instructors, advisory councils, and teacher educators will find this publication helpful in the development of sequential occupational education programs.

For additional information, call or write

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Sherwood Dees,
Director

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WHAT IS CAREER EDUCATION?

Career education is the term denoting the total effort by educational agencies and communities in presenting organized career-oriented activities and experiences to all persons from nursery school through adulthood, and orients the entire educational plan into one, unified, career-based system.

The success of the total cooperative community-school effort is dependent on the quality and quantity of four major characteristics. Those being:

1. **Career education is designed to acquaint individuals with career opportunities and options.**

   Presenting career information to students is the responsibility of the entire school staff. Unbiased and realistic career information school be integrated into appropriate subject matter content offered individuals at all levels.

2. **Career education is designed to aid individuals in making career preferences and/or choices.**

   Individuals should be extended the opportunity to explore career preferences to the depth desired. Coordination of school and community resources is necessary if individuals are to develop positive attitudes toward the world of work and realistic images of persons in the work world.

3. **Career education provides the vehicle for the development of such skills and abilities as are needed so that the individual might achieve his career goals.**

   Learning experiences should be structured to give the individual those skills and abilities as are needed so that he might achieve his career preference with the flexibility to change career direction without academic penalty. Career education emphasizes an employable product.

   The majority of school and staff resources should be directed toward (1) providing sequential and comprehensive training experiences to all individuals for the purpose of employment or further education, and (2) providing placement services as necessary for the individual to achieve his/her career goal.

4. **Career education is designed to assist individuals in developing a realistic self-concept.**

   Activities and/or experiences must be provided which will aid individuals in developing a realistic self-concept. How an individual perceives himself, how others perceive him, and what he perceives as an ideal self, often relates directly to expressed career interests. The comprehensiveness and accuracy of data possessed by the individual should lead to more rational decision making.

Career education not only encompasses general education, job information, skill development and leadership training but also helps students to develop attitudes about the personal, psychological, social and economic significance of work. Guidance and counseling activities assist the student in developing self-awareness and in matching his interests and abilities against potential careers.

Career education is a comprehensive educational program focused on careers, which begins in grade one or earlier and continues through the adult years. In elementary school, students are made aware of the wide range of jobs in our society and the roles and requirements involved. In junior high school, students may explore several specific clusters of occupations through hands-on experiences and field observation, as well as classroom instruction. They will be assisted in selecting an occupational area for further specialization at the senior high level. In senior high school, students should pursue their selected occupational area, exercising one of the following options –

intensive job preparation for entry into the world of work immediately upon leaving high school
preparation for post-secondary occupational education
four-year university career preparation
preparation or retraining for adult continuing education

The planning of sequential programs for career education programs which will provide individuals with the opportunity to develop the necessary knowledge, skills and attitudes needed for employment in an occupational area is essential to the development of sound programs in career education. Whether courses within the program are designed for periods involving one semester, parts of a semester, one year or longer, they must interlock in such a way so as to lead a student toward his occupational objective.

The following information is designed to show a few of the possible approaches to curriculum planning in the five broad areas of occupational education. These five areas are:

Applied Biological and Agricultural Occupations – comprised of the group of related courses or units of subject matter which are organized for carrying on learning experiences concerned with preparation for or upgrading in occupations requiring knowledge and skills in agriculture subjects. The functions of agricultural production, agricultural supplies, agricultural mechanization, agricultural products, ornamental horticulture, agricultural resources, forestry, and the services related thereto, are emphasized in the instruction designed to provide opportunities for pupils to prepare for or improve their competencies in agricultural occupations. An agricultural occupation may include one or any combination of these functions.

Business, Marketing and Management Occupations – include, but are not limited to, those activities involved in the systematic distribution of products and services to the consumer. Activities include organizational supervision and management, sales, distribution, communications, record keeping and others needed to support and evaluate these functions, excluding speculative and manipulative marketing practices. Sales-supporting functions are buying, transporting, storing, promoting, financing, marketing research and management. Emphasis is on the development of attitudes, skills, and understanding related to marketing, merchandising, and management. Also included are a variety of activities, such as recording and retrieval of data, supervision and coordination of office activities, internal and external communications, and the reporting of information in the area of communications and record keeping.

Health Occupations – comprised of the body of related subject matter, or the body of related courses and planned experiences designed to impart knowledge and develop understandings and skills required to support the health professions. Instruction is organized to prepare pupils for occupational objectives concerned with assisting qualified personnel in providing diagnostic, therapeutic, preventive, restorative, and rehabilitative services to people, including understandings and skills essential to provide care and health services to patients.

Industrial Oriented Occupations – concerned with preparing persons for initial employment, or for upgrading or retraining workers in a wide range of trade and industrial occupations. Such occupations are skilled or semi-skilled and are concerned with layout designing, producing, processing, assembling, testing, maintaining, servicing, or repairing any product or commodity. Included is instruction for apprentices in apprenticeable occupations or for journeymen already engaged in a trade or industrial occupation. Also included is training for certain semiprofessional occupations considered to be trade and industrial in nature.

Personal and Public Service Occupations – are derived from many of the traditionally recognized vocational education disciplines, including both Human Service Occupations and Public Service Occupations. Personal Service Occupations include those involving meeting the needs of the individual for his own betterment as a member of society. These occupations include, but are not limited to, those occupations which provide services desired and needed by the consumer in the managment of his home and possessions in addition to his day-to-day living. Some of the occupational programs related to personal services are food services, clothing services, services related to care of individuals (children, elderly and others), services for homes, and equipment and personal improvement services. Public Service Occupations include those occupations involving guardianship, maintenance and improvement of the public domain for the general welfare of society. Public Service Occupations related to human services include, but are not limited to, educational assistants and training specialists, hospitality employees and social service workers. Some of the municipal services included in Public Service Occupations are services related to sanitation and transportation, regulatory services and records, urban development services, park and recreation services, public safety and corrections services and other community services such as postal services.

The following two pages depict the Illinois Career Education Model and a Sequential Career Education Model.

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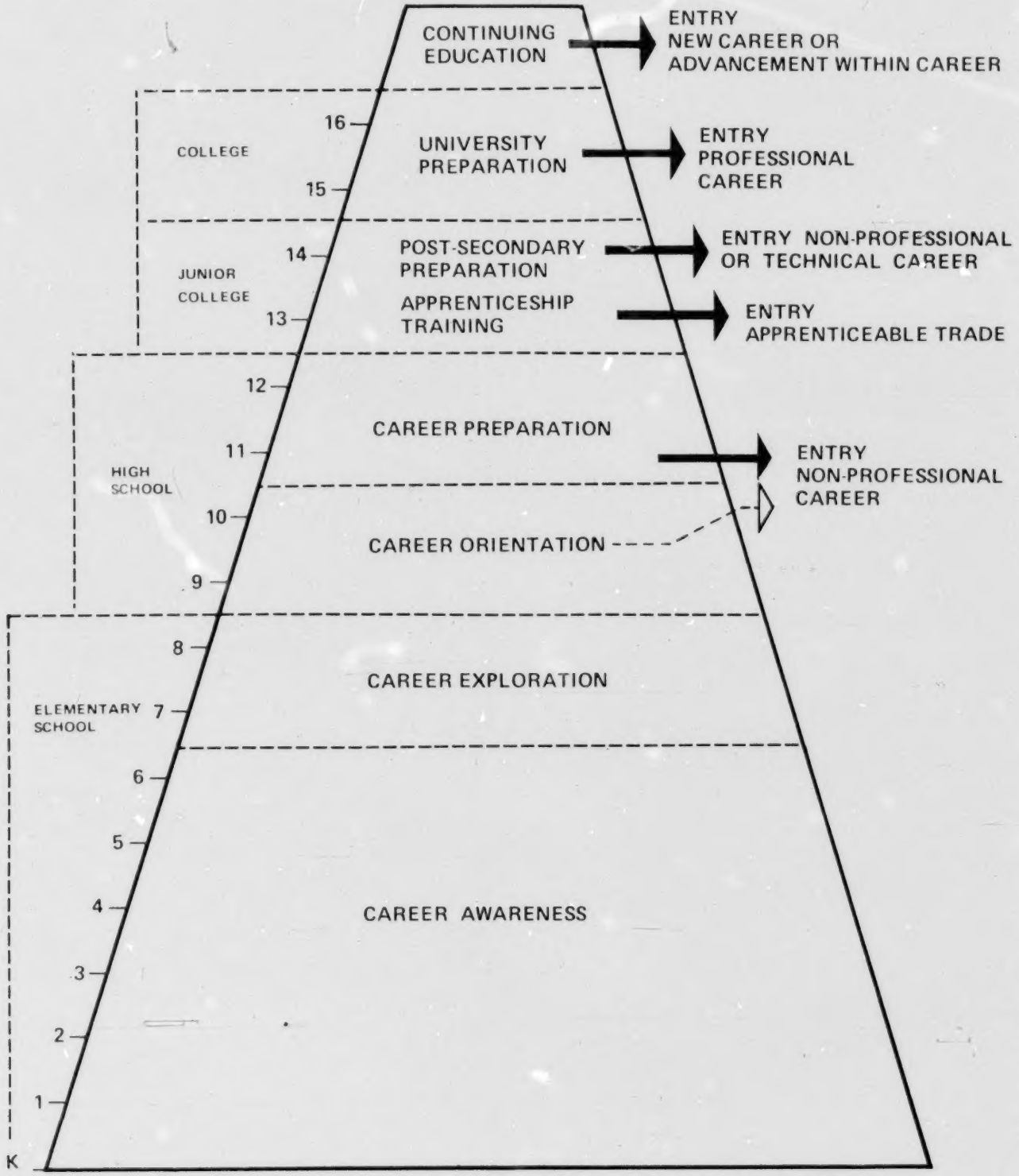

Career Education
ILLINOIS MODEL

A SEQUENTIAL CAREER EDUCATION MODEL

STUDENT DEVELOPS SELF-AWARENESS AND UNDERSTANDING OF HIS INTERESTS AND ABILITIES					
STUDENT DEVELOPS ATTITUDES ABOUT THE PERSONAL, SOCIAL AND ECONOMIC SIGNIFICANCE OF WORK					
GRADES K-3	GRADES 4-6	GRADES 7-8	GRADES 9-10	GRADES 11-12	POST-HIGH SCHOOL
OCCUPATIONAL AWARENESS: Student is informed about occupations through a series of clusters* representing the entire world of work	SELF-AWARENESS: Student becomes aware of abilities and aptitudes of self.	OCCUPATIONAL EXPLORATION: Student explores several clusters* of his choice.	OCCUPATIONAL ORIENTATION IN DEPTH, BEGINNING SPECIALIZATION: Student may select one cluster* to explore in greater depth Begin to develop entry level skill May change cluster* if desired	OCCUPATIONAL PREPARATION STUDENT SPECIALIZES IN ONE AREA Student specializes in one occupational area Takes prerequisites for further education and/or intensive skill training for job entry.	EMPLOYMENT IN AREA FOR WHICH TRAINED FURTHER EDUCATION IN ADULT EDUCATION PROGRAM FURTHER EDUCATION IN OCCUPATIONAL EDUCATION. GRADES 13 AND 14. FOUR YEAR UNIVERSITY CAREER PREPARATION

*A "cluster of occupations" is composed of recognized occupations which are logically related because they include identical or similar teachable skill and knowledge requirements for employability. The implication is that occupational education centered upon the knowledge and skills common to the occupations comprising a "cluster" should prepare students for entry into an "area" of "family" of occupations rather than any specific one.

Occupational clusters, representative of the entire world of work and around which a career education system might be designed are: business and office occupations, marketing and distribution occupations, communications and media occupations, construction occupations, manufacturing occupations, transportation occupations, agri-business and natural resources occupations, marine science occupations, environmental control occupations, public service occupations, health occupations, hospitality and recreation occupations, personal services occupations and home economics related occupations.

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CAREER EDUCATION GOALS

The development of a career education system will require the accomplishment of differing goals at each level of the existing school system. Suggested goals at the various grade levels are:

For grade level K-6 the goals could include:*

1. Increasing the child's understanding of his abilities.
2. Providing the opportunity for the child's exploration of the aptitude, interest and personality factors necessary on certain jobs.
3. Making the child aware that his self-image will determine his choice of work and way of life.
4. Assisting children to develop realistic attitudes and methods in dealing with school achievement as an aspect of a vocation.
5. Helping pupils understand that rapid changes taking place in the world of work will necessitate advanced specialized training.
6. Helping the child understand that all legitimate occupations are worthwhile.

The career education goals at the seventh and eighth grade levels could include:

Provide experiences for students to assist them in evaluating their interests, abilities, values, and needs as they relate to occupational roles.

Provide opportunities for further and more detailed exploration of selected occupational clusters, leading to the tentative selection of a particular cluster for indepth orientation at the ninth grade level.

Improve the performance of students in basic subject areas by making the subject matter more understandable and applicable to work through unifying and focusing it around a career development theme.

Career education goals at the ninth and tenth grade levels could include:

Provide indepth orientation leading to entry-level skills in one occupational area and providing a foundation for further progress, leaving open the option to move between clusters if desired.

Improve the performance of students in basic subject areas by making the subject matter more understandable and applicable to the world of work through unifying and focusing it around a career development theme.

Provide guidance and counseling for the purpose of assisting students in selecting an occupational speciality for eleventh and twelfth grade levels with the following options: intensive occupational preparation, or preparation and orientation for post-secondary occupational programs.

Develop attitudes and habits for successful employment performance.

Develop a positive self image which will promote self-esteem and motivation for achievement consistent with individual potential.

Develop an awareness and understanding of educational and career opportunities available.

Identify the educational and career decisions and plans that are appropriate to the individual's level of maturity and development.

*These goals were identified by the Special Programs Unit of the Division of Vocational and Technical Education, 1971.

For grade levels eleven and twelve, goals for career preparation could include:

Provide intensive preparation in a selected occupational cluster, or in a specific occupational area, in preparation for job-entry and/or further education.

Increase the student's motivation by relating occupational experiences to the world of work.

Provide comprehensive guidance and counseling in preparation for employment and/or further education.

Insure placement of all students, upon leaving school, in either (a) employment, (b) a post-secondary occupational education program, or (c) a four-year college program.

Maintain follow-up studies on all career education enrollees for use in program evaluation.

Career education goals at the thirteenth and fourteenth grades could include:

Provide intensive preparation in a selected occupational cluster, or in a specific occupatronal area, in preparation for job-entry and/or further education

Insure placement of all students, upon leaving school, in either (a) employment or (b) advanced training program

Maintain follow-up studies on all career education enrollees for use in program evaluation

Provide comprehensive guidance and counseling in preparation for employment and/or further education

Assist students to make the necessary occupational adjustments caused by an expanding technology

Provide instruction which leads to specialization in a particular occupational program

Provide curriculums oriented to local, state, regional or national occupational needs

Provide programs leading to supervisory and management positions at a level above persons without the advanced preparation

Prepare individuals for entry into useful employment, as skilled technicians, in occupations recognized as requiring technical knowledge

Increase the student's motivation by relating occupational experiences to the world of work

PLANNING SEQUENTIAL PROGRAMS

Steps in planning sequential occupational programs should include:

A. ORGANIZATION OF THE OCCUPATIONAL ADVISORY COMMITTEE

The occupational program should be developed and conducted with the advice of employers and other persons having current and substantial knowledge of the occupations for which students are to be prepared. Representatives on advisory committees may include:

a. employers and/or employer associations and management personnel
b. labor organizations
c. experienced, qualified workers in the occupations concerned
d. existing post-secondary programs involving the same or similar occupational education areas

An active advisory committee may also be an excellent source for providing resource personnel to be used for assistance in classroom teaching.

B. IDENTIFICATION OF EMPLOYMENT OPPORTUNITIES

Identification of employment opportunities should also be a part of planning occupational programs. Methods of identifying employment opportunities are:

a. local surveys accomplished by the educational agency concerned
b. area skill surveys accomplished by the Illinois State Employment Service
c. specific statements of need submitted by employers
d. other reliable data concerning regional, state, and national employment opportunities

C. DETERMINATION OF INSTRUCTIONAL OBJECTIVES

The objectives of instruction for occupational programs should:

a. be designed to prepare individuals for employment in an occupation or group of closely related occupations
b. be directed toward recognized occupations which require an appreciable amount of specialized training, but not toward those occupations generally considered as professional or requiring a baccalaureate or higher degree
c. provide students completing the program with occupational skills and knowledges which particularly qualify them for entry-level employment or for placement in post-high school occupational education

D. DEVELOPMENT OF INSTRUCTIONAL CONTENT

In determining instructional content, the following factors should be considered:

a. consultation with an occupational advisory committee
b. the needs of those engaged in or preparing to engage in the occupations
c. the skills and knowledges required by individuals to work effectively in the occupation or cluster of occupations associated with the instructional program
d. the instructional approach classroom, laboratory, and/or on the job experience, which will provide the most effective learning to students involved

E. DETERMINATION OF PROGRAM DURATION

In planning occupational programs the determination of the program duration should be taken into consideration. Duration of occupational programs should:

a. be determined either in consultation with an occupational advisory committee or through analysis of the occupations involved to determine the levels of ability and knowledge needed by the student to qualify for employment
b. be based upon the amount and complexity of the skills and knowledges required to qualify individuals for employment in the occupations associated with the instructional program
c. reflect consideration of skill and knowledge requirements for effective articulation with post-secondary occupational education program

F. ESTABLISHMENT OF CRITERIA AND PROCEDURES FOR ENROLLMENT OF STUDENTS

Students enrolled in occupational programs should:

a. be pursuing occupational objectives compatible with those of the curriculum pattern selected
b. have met selection standards appropriate to the curriculum pattern they have selected

G. DETERMINATION OF FACILITIES AND EQUIPMENT

Facilities and equipment used in operating an occupational program should be adequate to meet the objectives of the program. To help assure this adequacy, facilities and equipment should be:

a. designed or selected in consultation with an occupational advisory committee
b. designed or selected in accordance with the instructional objectives they are intended to achieve
c. meet generally accepted or specified standards for operational safety

H. ARRANGEMENTS FOR STAFFING

The following factors should be considered in making arrangements for staffing occupational programs.

a. occupational programs should be supervised and conducted by qualified personnel
b. administrators, supervisors, instructors and coordinators should meet appropriate teacher certification requirements and possess competencies needed
c. it is also recommended that preparation include occupational work experience in the field of teaching

I. PROVISION FOR OCCUPATIONAL GUIDANCE AND PLACEMENT

Occupational education programs should be coordinated with guidance and counseling services which include:

a. providing students with information and assistance in program planning, selection and enrollment
b. rendering assistance to students who are pursuing an occupational program plan
c. providing occupational placement services to students completing the program

J. ESTABLISHMENT OF EVALUATION PROCEDURES

Continuous evaluation of the effectiveness of occupational program should include:

a. continued evaluation by the occupational advisory committee
b. a follow-up of all students completing, or terminating without completing, the program. The follow-up is to obtain information concerning the employment status of the individual
c. periodic evaluation by persons having special competencies in the occupational programs concerned
d. periodic evaluation by faculty of local school district
e. evaluation by present and former students of the occupational programs
f. periodic evaluation by present and former employers of students of the occupational programs
g. annual evaluation by local school district personnel when developing the Local Plan
h. development of a systematic procedure of continuous evaluation by the local school district

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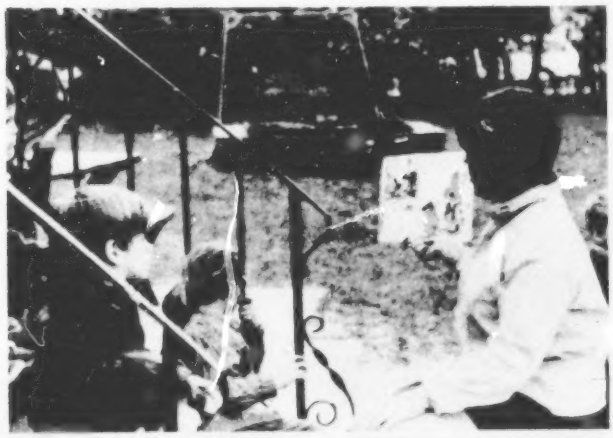
The following section outlines and gives activities concerning the following:

Suggested K-8 occupational information program
Suggested sequential programs in each of the five broad areas of occupational education at the secondary level
Programs available for post-secondary schools in each of the five broad areas of occupational education

This material is provided for your use in planning. It is not intended to be the only way that a meaningful and effective occupational education program may be implemented. The program should meet your students' needs and interest and reflect input from your local advisory council.



PERSONAL AND PUBLIC SERVICE OCCUPATIONS

APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS

INDUSTRIAL ORIENTED OCCUPATIONS

HEALTH OCCUPATIONS

BUSINESS, MARKETING, & MANAGEMENT OCCUPATIONS

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SUGGESTED K-8 OCCUPATIONAL INFORMATION PROGRAM

The elementary years should be an exploratory period in which the world of work is presented to children in a manner that is realistic and appropriate to their stage of development. Specifically, objectives at this level should be to let children know about the multitude of occupational opportunities, help them develop a realistic view of the world of work and their own abilities and limitation, provide them with basic information about the major occupational fields, and stress that there is dignity in work and that every worker performs a useful function.

One major purpose in developing a program of occupational information at the elementary grades is to provide children at this early age with accurate information about the world of work that will help them in the future when they are required to make tentative educational and vocational decisions.

Another purpose in presenting occupational information at the elementary school level is to present information which will broaden the base of the youngster's understanding of the world as a background for later decisions.

The Special Programs Unit, Division of Vocational and Technical Education, has a publication entitled "Vocational Guidance at the Elementary Level." The content of this publication is as follows:

PURPOSE

OBJECTIVES

METHOD AND TECHNIQUES WHICH CAN BE USED BY ELEMENTARY SCHOOL TEACHERS TO DISPENSE OCCUPATIONAL INFORMATION AND GUIDANCE TO CHILDREN

SUGGESTED PROJECTS FOR PROVIDING A COORDINATED SUPERVISED PROGRAM

A LIST OF OCCUPATIONAL INFORMATION ACTIVITIES

For more detailed information concerning the K-8 Occupational Information Program, please contact:

Special Programs Unit
Division of Vocational and Technical Education
Board of Vocational Education and Rehabilitation
State of Illinois
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Telephone: (217) 525-5098

Programs models for Grades 7-8 in career exploration are currently being developed. These program models are currently being field tested and revised. The models have been designed around the five broad areas of occupational education and each occupational area could be used for a twelve-week unit or more, should the local school desire.

SOME SUGGESTED K-8 OCCUPATIONAL INFORMATION ACTIVITIES

1. Interviews
2. Skits
3. Theme writing
4. Bulletin board
5. Debate
6. General discussion
7. Small group discussion
8. Committee work
9. Individual study
10. Vocational Guidance Kits
11. Newspaper articles
12. Oral reports
13. Field trips
14. Movies
15. Filmstrips
16. Slides
17. Overhead and/or opaque projections
18. Collect want ads
19. Write want ads
20. Employment Security Commission Job lists
21. Exhibits
22. Collect materials
23. Observation
24. Role Playing
25. Resource persons
26. Brainstorming
27. Games
28. Research Projects
29. Demonstrations
30. Radio and TV programs
31. Illustrations
32. Prepare lists
33. Projects
34. Chalktalks
35. Panel discussions
36. Makes files
37. Make tests
38. Standardized tests
39. Problem solving
40. Prepare charts and graphs
41. Window displays
42. Write letters
43. Assigned reading
44. Thought problems
45. Prepare speeches
46. Notebooks
47. Scrapbooks
48. Lectures

For more detailed information concerning the K-8 Occupational Information Program, please contact:

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SUGGESTED SEQUENTIAL PROGAMS AT THE SECONDARY LEVEL

FOR

Applied Biological and Agricultural Occupations
Business, Marketing and Management Occupations
Health Occupations
Industrial Oriented Occupations
Personal and Public Service Occupations

Courses offered at the ninth and tenth grade level may be designed to include general, basic information and experiences applicable to nearly every occupation within the occupational field and are designed as orientation courses to the occupational training offered at the upper levels.

The ninth grade typically includes an introduction to basic information and occupations related to the total field. The next level of courses is usually designed to give students the beginning level of knowledge and skills in a given occupational cluster.

Courses at the eleventh and twelfth grade level may be more specialized in nature and should be designed with specific occupational objectives in mind.

The curricula at the secondary level prepare students in a core of generalized skills basic to a cluster of related occupations. Students are able, with adequate counseling, to appraise their interests and abilities in relation to several occupations in the cluster. Students are afforded job mobility through both employable and transferable job skills.

The courses may be offered in the local school, through the area vocational school, by a joint agreement with a nearby school, through a contract with a private school, or a combination of the above means.

Capstone laboratory programs at the eleventh and twelfth grades are receiving increased attention as a means for integrating skills and knowledges prior to full-time employment. These courses are usually taught on the block-time method of teaching with the various courses alloted a block of time equal to 1½, 2 or 2½ periods daily.

Occupational education is most meaningful when offered in a "cluster" or "family" of closely related occupations. This concept is conducive to breadth of training, flexibility in occupational choice, and in ultimate job placement. To be most effective, occupational training must be closely identified with the employing community. Machines, tools, materials, methods, practices, and skills must be comparable to those found in the occupations, and should be taught by occupationally qualified instructors.

Cooperative, part-time work experience is still regarded as a very effective culminating activity for students, for it is difficult to duplicate through directed or simulated experience the excitement of an actual job setting. Even with cooperative work experience, there is need for carefully selecting training stations, employer-school agreements that structure the experience, plus related instruction in the school to assist the student with any knowledge gaps.

Occupational education should provide the essentials which will make it possible for students to find employment in a number of specific jobs related to the area of the occupational preparation. A comprehensive plan for occupational education in a school should provide opportunities for training in many occupations for students with varying levels of ability and a variety of career interests.

In the 70's schools must be especially concerned with attitudes and habits which go with successful job performance. This cannot be a corrective action to be achieved in one course or one year; rather, this must become an integral part of the emphasis of each course. The curriculum must provide opportunities for students to interact, to develop a strong self-awareness, and to relate to others on a personal basis.

The variety of occupational offerings and the depth of the instruction is limited only by the interests and aptitudes of students, by the limitations of the school's facilities, the competency of the instructional staff, and the employment opportunities in the area.

APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS SUGGESTED SEQUENTIAL PROGRAMS

PROGRAMS	NINTH GRADE Occupational Orientation	TENTH GRADE Occupational Orientation	ELEVENTH GRADE & TWELFTH GRADE Occupational Experiences	
Livestock Farmer Livestock Buyer	Ag Orientation Animal Science	Soil Management Mechanical Skills	Ag Power & Machinery Beef or Swine Production	Feeds and Feeding Ag Business Management Co-Op Supervised Experience Program
Animal Specialist Feed Specialist	Ag Orientation Animal Science	Ag Construction & Maintenance Mechanical Skills	Horse & Pet Care Beef or Swine Production	Feeds and Feeding Ag Business Management Co-Op Supervised Experience Program
Animal Nutritionist	Ag Orientation Animal Science	Soil Management Mechanical Skills	Beef or Swine Production Horse & Pet Care	Feeds and Feeding Environmental Controls Co-Op Supervised Experience Program
Ag Mechanics Ag Machinist	Ag Orientation Mechanical Skills	Ag Construction & Maintenance Soil Management	Ag Power & Machinery Ag Electrification	Tractor Maintenance Ag Supply & Service Co-Op Supervised Experience Program

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APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS SUGGESTED SEQUENTIAL PROGRAMS

Secondary

PROGRAMS	NINTH GRADE Occupational Orientation	TENTH GRADE Occupational Orientation	ELEVENTH GRADE & TWELFTH GRADE Occupational Experiences	
Fertilizer Specialist Grain Farmer Grain Buyer	Ag Orientation Plant Science	Soil Management Mechanical Skills	Ag Power & Machinery Ag Chemicals	Ag Fertilizers Ag Business Management Co-Op Supervised Experience Program
Ag Chemicals	Ag Orientation Plant Science	Soil Management Mechanical Skills	Fertilizers Environmental Controls	Ag Chemicals Ag Supply & Service Co-Op Supervised Experience Program
Horticulturist	Ag Orientation Plant Science	Soil Management Mechanical Skills	Landscaping Environmental Controls	Turf Management Greenhouse Management Ag Business Management Co-Op Supervised Experience Program
Supply & Service	Ag Orientation Animal Science	Soil Management Mechanical Skills	Chemicals Fertilizers Ag Power & Machinery Ag Electrification	Feeds and Feeding Ag Marketing Ag Business Management Co-Op Supervised Experience Program

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APPLIED BIOLOGICAL AND AGRICULTURAL OCCUPATIONS SUGGESTED SEQUENTIAL PROGRAMS

Secondary

PROGRAMS	NINTH GRADE Occupational Orientation	TENTH GRADE Occupational Orientation	ELEVENTH GRADE & TWELFTH GRADE Occupational Experiences	
Ag Resource Specialist	Ag Orientation Plant Science	Soil Conservation Soil Management	Forest Conservationist Environmental Controls	Wildlife & Game Ag Supply & Service Co-Op Supervised Experience Program
Forester	Ag Orientation Plant Science	Soil Management Environmental Controls	Soil Conservation Landscaping	Forest Technology Ag Supply & Service Co-Op Supervised Experience Program
Ag Products Specialist	Ag Orientation Animal Science	Mechanical Skills Plant Science	Environmental Controls Dairy & Non-Food Products	Ag Marketing Ag Supply & Service Co-Op Supervised Experience Program

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BUSINESS, MARKETING AND MANAGEMENT OCCUPATIONS SUGGESTED SEQUENTIAL PROGRAMS

PROGRAMS	NINTH GRADE Occupational Orientation	TENTH GRADE Occupational Orientation	ELEVENTH GRADE Occupational Experiences	TWELFTH GRADE Occupational Experiences
CLERICAL Possible Electives: Business Law Consumer Economics Business Principles and Organization Business Behavior and Job Relations	Introduction to Business Exploratory Business	Typing (first year) Recordkeeping Business Math	Typing (second year) Bookkeeping-Accounting (first year) Business English Introduction to Data Processing	Clerical Office Practice Cooperative Education
SECRETARIAL Possible Electives: Consumer Economics Business Law Business Principles and Organization Business Behavior and Job Relations	Introduction to Business Exploratory Business	Typing (first year) Business Math Business English	Typing (second year) Shorthand (first year) Bookkeeping-Accounting (first year)	Secretarial Office Practice Introduction to Data Processing Cooperative Education
BUSINESS DATA PROCESSING Possible Electives: Business English Office Procedures Principles of Business Organization Consumer Economics Business Behavior and Job Relations	Introduction to Business Exploratory Business	Typing Introduction to Data Processing Bookkeeping-Accounting (first year)	Data Processing II Business Math	Data Processing III Cooperative Education

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BUSINESS, MARKETING AND MANAGEMENT OCCUPATIONS SUGGESTED SEQUENTIAL PROGRAMS

Secondary

PROGRAMS	NINTH GRADE Occupational Orientation	TENTH GRADE Occupational Orientation	ELEVENTH GRADE Occupational Experiences	TWELFTH GRADE Occupational Experiences
ACCOUNTING-COMPUTING Possible Electives: Business Law Business Principles and Organization Business English Consumer Economics Business Behavior and Job Relations	Introduction to Business Exploratory Business	Typing (first year) Business Math	Office Machines Bookkeeping-Accounting (first year) Introduction to Data Processing	Bookkeeping-Accounting (second year) Cooperative Education
MARKETING-DISTRIBUTIVE Possible Electives: Business Law Business English Business Behavior and Job Relations Business Principles and Organization	Introduction to Business Exploratory Business	Typing Office Machines Business Math	Bookkeeping-Accounting Retailing-Salesmanship Consumer Economics	Marketing-Distributive Education Practice Cooperative Education
SPECIAL NEEDS Possible Electives: Consumer Economics Applied Office Mathematics Cash Register Operations Business Behavior and Job Relations	Exploratory Business Clerical Office Procedures	Recordkeeping Typing (first year) Receptionist Typing Introduction to Office Services	Typing (second year) Indexing and Filing Key-Punch Operator Training Duplicating-Reproducing Machines Cooperative Education	Clerical Office Practice Cooperative Education

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HEALTH OCCUPATIONS SUGGESTED SEQUENTIAL PROGRAMS

PROGRAMS	NINTH GRADE	TENTH GRADE Occupational Orientation	ELEVENTH AND TWELFTH GRADES OCCUPATIONAL METHODS OF SKILL DEVELOPMENT
Related Health Occupations Areas	Introductory Composite Course	Suggested Semester or Mini Courses for Outline and Curriculum Content of a Health Occupations Orientation Program	One of Two Year In-Service, One Year In-School and One Year Coop or Two Year Coop
Dietary, Health Services	Introduction to Health Occupations Orientation to specific Health Occupation areas and levels of workers in these areas. Medical ethics. Personal qualities of the health worker. Cleanliness and dress. Relationships with co-workers. Being part of a team. Functions of Health Care institutions. Job task lists maintaining cleanliness in the work environment.	Including units of Nutrition, Anatomy of Digestive System, awareness of special diets to treat illness. In-depth study of Health Occupations related to meeting patients dietary needs.	In-school, extended campus experiences and cooperative education in Health Care facility.
Geriatrics		Growth and development (especially the aging process). Special physical, mental, spiritual and emotional needs of the aged. In-depth study of Health Occupations related to caring for the aged and the facilities in which these services are offered.	In-school, laboratory, extended campus in extended care facility, shelter care, nursing home, and hospital. Cooperative Education
Rehabilitation		Growth and development, anatomy of the skeletal and muscular systems, body mechanics, range of motion, in-depth study of Health Occupations related to caring for patients with rehabilitative needs.	In-school, laboratory, extended campus in mental health facilities, physical therapy and occupational therapy departments and nursing homes. Cooperative Education
Public Health Public Health		Microbes and Disease of man. Safety. Personal and Community health services. Nutrition, environmental factors which effect health.	In-school, laboratory, extended campus in public health departments and/or agencies. Cooperative Education.
Mortuary Service		Anatomy and Physiology, record keeping, filing, public relations in psychology, business math.	In-school, laboratory, extended campus in the mortuary and/or pathology department. Cooperative Education.
Clerical Services (Ward Clerk, Medical Secretary)		Filing, Typing, Communications, Medical Terminology.	In-school, laboratory, extended campus in hospitals, nursing homes, doctors offices, dentists offices, etc.

(The skill development level (11th and 12th grades) must train for employability upon high school graduation and/or continuation of Health Occupations Education at the post-high school level.)

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HEALTH OCCUPATIONS SEQUENTIAL PROGRAMS

SUGGESTED METHODS OF INSTRUCTION FOR GRADES 9 THROUGH 12

The following methods are recommended for both the Orientation and Skill areas:

Students interview workers in the suggested areas. Field trips to facilities to view workers performing tasks. Speakers from the community engaged in a specific occupation. (Consider using students in skilled training as they relate well to this age group.) Simulated job experiences. Problem solving, role playing, skits, small group activities, buzz sessions, conferences, films, film strips, posters, collages, flannel boards, chalk boards, tape recordings, models, overhead transparencies, lectures.

METHOD OF IMPLEMENTING THE SKILL DEVELOPMENT PROGRAMS FOR GRADES 11 and 12

Cooperative Education – related in-school classes plus on-the-job training.
Extended Campus – students learn and practice skills in a facility that provides clinical experiences for students.
In-School Classroom and Laboratory Practice.

Any combination of these methods may be utilized. The best methods available to achieve quality education and to produce competent workers should be explored.

The decision of which units of study and skilled training programs to offer should be based upon factual data of student and manpower needs and post-high school education opportunities in the local community. These needs are determined through the utilization of advisory committees, surveys and articulation with all existing health care and health educational training facilities. The general objective is to prepare students for employment upon completion of high school and/or to prepare him to pursue post-high school Health Occupations education. Achieving this goal demands the involvement of all available school and community resources.

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INDUSTRIAL ORIENTED OCCUPATIONS SUGGESTED SEQUENTIAL PROGRAMS *

Secondary

PROGRAMS	NINTH GRADE Occupational Orientation	TENTH GRADE Occupational Orientation	ELEVENTH GRADE Occupational Experiences**	TWELFTH GRADE Occupational Experiences**
METALS OCCUPATIONS	**Possible Clusters, but not limited to** Aerospace Metal Graphic Arts Wood Drafting Electrical Plastics Construction Power Mechanics	**Cluster or Semester Courses** Metalworking Drafting	Diversified Metals or Welding or Sheet Metal or Machine Shop and/or Cooperative Education	Diversified Metals or Welding or Sheet Metal or Machine Shop and/or Cooperative Education
DRAFTING OCCUPATIONS	**Possible Clusters, but not limited to** Aerospace Metal Graphic Arts Wood Drafting Electrical Plastics Construction Power Mechanics	**Cluster or Semester Courses** Drafting Graphic Arts	Architectural Drafting or Machine Drafting or Drafting and/or Cooperative Education	Architectural Drafting or Machine Drafting or Drafting and/or Cooperative Education

*These suggested programs for occupational education in Industrial Oriented Occupations represent just a few of the hundreds of Industrial Oriented Occupations. Each school is encouraged to be creative and innovative to reach the main objective -training for a CAREER.

**Occupational Preparation–Suggested minimum of 10 hours per week – Suggested for two years. Offerings at the Occupational Preparation level may consist of:

a. One-or-Two-year in-school courses, or
b. One-year in-school courses followed by a one-year on-the-job cooperative program, or a
c. Two-year on-the-job cooperative program

INDUSTRIAL ORIENTED OCCUPATIONS SUGGESTED SEQUENTIAL PROGRAMS

PROGRAMS	NINTH GRADE Occupational Orientation	TENTH GRADE Occupational Orientation	ELEVENTH GRADE Occupational Experiences	TWELFTH GRADE Occupational Experiences
ELECTRICAL AND/OR ELECTRONIC OCCUPATIONS	**Possible Clusters, but not limited to** Aerospace Metal Graphic Arts Wood Drafting Electrical Plastics Construction Power Mechanics	**Cluster or Semester Courses** Electricity Power Mechanics Drafting	Radio-Television Repair or Appliance Repair or Electrical Occupations or Electronics and/or Cooperative Education	Radio-Television Repair or Appliance Repair or Electrical Occupations or Electronics and/or Cooperative Education
CONSTRUCTION OCCUPATIONS	**Possible Clusters, but not limited to** Aerospace Metal Graphic Arts Wood Drafting Electrical Plastics Construction Power Mechanics	**Cluster or Semester Courses** Drafting Electrical Woodworking Sheet Metal	Construction Trades or Carpentry or Heating, Air-Conditioning and Ventilation or Building Trades or Cabinet Making and/or Cooperative Education	Construction Trades or Millwork and Cabinet Making or Carpentry or Heating, Air-Conditioning and Ventilation or Building Trades and/or Cooperative Education

INDUSTRIAL ORIENTED OCCUPATIONS SUGGESTED SEQUENTIAL PROGRAMS

PROGRAMS	NINTH GRADE Occupational Orientation	TENTH GRADE Occupational Orientation	ELEVENTH GRADE Occupational Experiences	TWELFTH GRADE Occupational Experiences
TRANSPORTATION OCCUPATIONS	Possible Clusters, but not limited to Aerospace Metal Graphic Arts Wood Drafting Electrical Plastics Construction Power Mechanics	Cluster or Semester Courses Power Mechanics Metalworking Drafting Aerospace	Auto Mechanics or Auto Body and Fender Repair or Small Engine Repair or Air Power and Air Frame and/or Cooperative Education	Auto Mechanics or Auto Body and Fender Repair or Small Engine Repair or Air Power and Air Frame and/or Cooperative Education
GRAPHICS ARTS OCCUPATIONS	Possible Clusters, but not limited to Aerospace Metal Graphic Arts Wood Drafting Electrical Plastics Construction Power Mechanics	Cluster or Semester Courses Graphic Arts Drafting	Graphic Arts Occupations and/or Cooperative Education	Graphic Arts Occupations and/or Cooperative Education

PERSONAL AND PUBLIC SERVICE OCCUPATIONS SUGGESTED SEQUENTIAL PROGRAMS

Secondary

PROGRAMS	NINTH GRADE Occupational Orientation	TENTH GRADE	ELEVENTH AND TWELFTH GRADES Occupational Experiences
	Composite Course	Typically Semester Courses	One- or Two-Year In-School, One Year In-School and One year Co-op, or Two Year Co-op
Child Care Services	INTRODUCTION TO PERSONAL SERVICE OCCUPATIONS Introductory occupational information and experiences as related to training for employability in personal service occupations including personal relationships, grooming, child care, clothing, foods, housing, home furnishings, and home and institutional management	Including such units as growth and development of the child, behavioral patterns of children as are needed for guiding and supervising children in day care centers and other related occupations	Child Care Lab Cooperative Education
Clothing Management, Production and Services		Including such units as textiles, construction, selection, and maintenance as related to clothing occupations	Production Clothing Construction Clothing Alteration Clothing Care and Maintenance Cooperative Education
Food Management, Production and Services		Including such units as nutrition, food principles, food preparation, buying of foods, sanitation, storage, handling of foods and serving of foods as related to all phases of food service occupations	Quantity Food Preparation & Service Cooperative Education
Home Furnishings, Equipment and Services		Including such units as selection and care of equipment, accessories, and home furnishings as applicable to the field of interior decorating and other related occupations	Production Sewing for the Home Home Furnishings and Decorating Appliance & Equipment Demonstration Cooperative Education
Institutional & Home Management and Supportive Services		Including such units as management principles, home and institutional maintenance, crafts, feeding, care of the elderly and other occupations related to institutional and home management	Maintenance Services Services for the Elderly Cooperative Education

(Training in any one of these areas should be for a cluster of jobs related to the area)
(In some areas, training could be interdepartmental with more than one department being responsible for a portion of the training)

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PERSONAL AND PUBLIC SERVICE OCCUPATIONS SUGGESTED SEQUENTIAL PROGRAMS

Secondary

PROGRAMS	NINTH GRADE Occupational Orientation	TENTH GRADE	ELEVENTH AND TWELFTH Occupational Experiences
	Composite Course	Typically Semester Courses or Mini Courses	One or Two Year In-Service, One year In-School, and One Year Co-op, or Two Year Co-op
Educational Assistants	INTRODUCTION TO PUBLIC SERVICE OCCUPATIONS Introductory occupational information and experiences as related to training for employability in service occupations in local, State and Federal agencies. Typically including an orientation to recreation, environmental control, lodging services, transportation services, educational assistants and custodial services	Including such units as child development, library services, audio-visual service, business practices in the classroom, first aid, arts and crafts for the young	Child Development Lab Classroom Assistant Cooperative Education
Environmental Health		Including such units as introduction to environmental control, air pollution, noise pollution, water pollution, biology, air and water testing	Environmental Control Cooperative Education
Hospitality		Including such units as human behavioral psychology, customer relations, local and regional attractions, catering, waiter/waitress training, food services, housekeeping	Food Management Production & Services Recreational Sports Public Housekeeping & Maintenance Cooperative Education
Recreation		Including such units as recreational sports, arts and crafts, child development, modern folk dancing, campcraft, story telling, first aid, game leadership	Child Development Lab Recreational Activities Cooperative Education
Transportation Services		Including units in traffic problems, interstate commerce law, customer relations, traffic management, transportation systems, freight class and rates, report writing	Transportation Services Cooperative Education

(Training in any one of these areas should be for a cluster of jobs related to the area)
(In some areas, training could be interdepartmental with more than one department being responsible for a portion of the training)

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SUGGESTED PROGRAMS AT THE POST-SECONDARY LEVEL

Programs available for post secondary schools in each of the five broad areas of occupational education may include:

Applied Biological and Agricultural Occupations

Agricultural Chemicals
Agricultural Mechanics
Agricultural Power and Machinery
Agricultural Production
Agricultural Products
Agricultural Resources
Agricultural Supplies and Services
Farm Business Management
Forest Technology
Forest Products Technology
Ornamental Horticulture
Floriculture
Landscaping
Turf Management

Business, Marketing and Management Occupations

Office Management
Legal Secretarial
Medical Secretarial
Executive Secretarial
Court Reporting
Technical Secretarial
General Office Clerical
Instructional Materials Technology
Key Punch Operations
Tabulating Machine Operations
Computer Operations
Programming
Systems
Data Processing Management
Accounting Aide Program
Accounting Systems Programming
Accounting Technology
Accounting and Financial Management
Business Mid-Management
Industrial Marketing
Hotel-Motel Management
Food Distributive and Services Management
Advertising
Finance and Credit
Petroleum
Real Estate
Insurance
Retail Sales, Purchasing and Merchandising
Transportation and Traffic Management
Technical Sales

Health Occupations

Dental Assisting
Dental Hygiene
Dental Laboratory Technology
Environmental Health Technology
Inhalation Therapy Assisting
Medical Assisting
Medical Laboratory Assisting
Mental Health Technology
Mortuary Science Technology
Nursing (Associate Degree)
Nursing (Practical)
Occupational Therapy Assisting
Orthotics
Physical Therapy Assisting
Prosthetics
Radiological Technology
Recreational Leadership

Industrial Oriented Occupations

Graphic Arts Occupations
Graphic Arts Technology
Photography Occupations
Printing Technology
Radio and Television Electronics
Commercial Art
Air Conditioning
Architectural Technology
Concrete Technology
Construction Trades
Drafting Occupations
Drafting Technology
Electrical Technology
Electro-Mechanical Technology
Electronics Occupations
Electronics Technology
Foremanship and Supervision
Structural Steel Technology
Woodworking
Civil Technology
Chemical Technology
Industrial Electricity
Industrial Maintenance
Industrial Technology
Instrumentation Technology
Machine Shop Occupations
Machine Tool Production
Machine Tool Technology
Petroleum Technology
Plastics Technology
Quality Control Technology

Industrial Oriented Occupations (Continued)

Sheet Metal Trades
Tool and Die Making
Welding
Aeronautical Technology
Aircraft Maintenance
Aircraft Operations
Air Traffic Controller
Automotive Body and Fender
Automotive Mechanic
Automotive Service
Automotive Technology
Aviation Ground Operations
Commercial Pilot Training
Diesel Engine Mechanic

Personal and Public Service Occupations

Airline Stewardess
Baking Occupations
Care and Guidance of Children
Cooking Occupations
Cosmetology
Emergency Preparedness
Environmental Control Technology
Environmental Health
Executive Development
Fashion Design
Fire and Fire Safety Technology
Fireman Training
Food Service Occupations
Health Facilities Management
Hotel and Lodging
Housing Rehabilitation Advisors
Interior Decorating
Law Enforcement Training
Library Technology
Management and Supervision
Police Science Technology
Postal Operations
Public Service Occupations
Recreation
Social Service Aide
Teacher Aide
Transportaiton
Water and Waste Treatment Technology